

Sheep Creek Vegetation Management Appendix D

Cumulative Effects Analysis

Process and Project Area Activities

The following process and assumptions were used by the Sheep Creek ID Team in their analysis of the effects of actions proposed in this document on their resources.

- A. Analysis Area** - In general, the analysis area will be the project area. If the resource being analyzed necessitates extending the analysis area outside the project area for an appropriate analysis then the extent of the analysis area is documented under each resource area.
- B. Effects** - The specific effects of each action alternative on the environment, including the No Action alternative are to be analyzed by each resource area.

Actions to be analyzed by applicable resources are:

1. Commercial timber harvest variations (HTH, HIM, HPO, HSH, HBT-Enhance) include logging systems (tractor, skyline, forwarder)
2. Non-commercial treatments without harvest (PCT- Hand + Mechanical, FUH, FUM, RHCA-Wetland) include removal method
3. Post-Harvest treatments (grapple piling, underburing, hand piling, whipfelling, planting)
4. Prescribed Fire – including mechanical pre-treat
5. Mechanical Control lines for burning
6. Fuels Treatments and Harvest within RHCAs
7. OFMS restoration to OFSS
8. Connective Corridors
9. Snag Retention and Snag Creation
10. Temporary Road Construction (both created and utilizing non-system roads)
11. Closed Roads Re-opened for Administrative Access (and maintenance to open)
12. Road Decommissioning
13. Stored roads designated for OHV use
14. Roadside Hazard Tree Removal
15. Mitigation Measures
16. Culvert Replacement

Show the cause and effect for Direct, Indirect, and Cumulative effects, defined as follows:

Direct Effects: Explain the direct effects the implementation of the alternatives would have on the environment. These include effects which are caused by the action and occur at the same time and place as the action.

Indirect Effects: Describe indirect effects of alternatives on the environment. Indirect effects include reasonably foreseeable outcomes which are caused by the action but are later in time or farther removed in distance.

Cumulative Effects: The cumulative effects analysis will include:

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Past Actions + Present Actions + Proposed Actions + Reasonably Foreseeable

Present actions will incorporate all known activities. Reasonably foreseeable future is approximately 5 years within which we are reasonably certain our proposed actions would occur.

Note: Should any parameter change, it will be documented in the effects writeup for that resource.

C. Analyze the effects in terms of:

1. **Differences from the present condition:** How do each of the alternatives (include all actions under each) change the environment based on what is there now? What are the specific differences between alternatives? What is the direction of the effect (increase or decrease)?
2. **Duration:** How long will the impacts last?
3. **Significance:** Analyze in terms of context and intensity.
 - **Context:** Analyze whether effects are local, regional, national, or affect society as a whole.
 - **Intensity:** Analyze in terms of severity of impacts.

Effects write-ups need to disclose what these actions WILL DO to the environment.

Avoid relative measurements such as "minimal, substantial, etc". Talk about the specific differences between alternatives in units of measure that are relevant, quantifiable, and descriptive. Use the Key Indicators to describe the effects on the key issues.

Use tables graphs, drawings, etc. when appropriate and available.

Use references to relevant scientific studies to back up statements when appropriate and available. In addition, identify where there are information gaps, incomplete or unavailable information.

IMPORTANT: Include a section on Forest Plan Compliance in your reports which describes how the project complies with the goals, standards, and guidelines for your resources.

Include your Literature Cited at the end of your report using the 2012 EMC Publishing Arts Style Guide format.

Sign and date your report – can be electronic signature but needs to be done.

D. Present and Reasonably Foreseeable Future Actions

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The following is a list of present and reasonably foreseeable future activities within the project area, and on immediately adjacent public and private lands. This list will serve as a guide for resource specialists as they define their Analysis areas for their resource and identify the direct, indirect, and cumulative effects of implementing the Sheep Creek Vegetation Management project alternatives. Reasonably foreseeable future is defined as within the next 5 years for this analysis.

To understand the contribution of past actions to the cumulative effects of the proposed action and alternatives, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of all prior human actions and natural events that have affected the environment to the present.

Present and Reasonably Foreseeable Future Actions in the Sheep Creek Project Area

Project Name	SWS	Year	Activity
Vegetation Management			
Noxious Weed Management Plan	All	Ongoing	Continue prevention and treatment strategies for known noxious weed sites from the 1994 W-W Noxious Weed Management Plan and subsequent amendments.
W-W Invasive Species Treatment ROD	All	Ongoing	Implement the W-W Invasive Species ROD, which includes an Early Detection Rapid Response (EDRR) strategy for addressing new sites, along with strategies for preventing the spread of and treating known sites.
Fuels Reduction and Prescribed Burning			
Blue Fly Fuels Reduction	All		No overlap in fuels activities expected to occur
Recreation			
Hiking Trails	All		No FS system hiking trails, although mixed use is allowed on OHV trails
Winom-Frazier OHV Trails	Sheep Creek SWS	Ongoing	OHV use is permitted on most roads within project area and cross-country
Dispersed Camping	All	Ongoing	Dispersed camping occurs primarily during hunting season and can occur throughout the project area since there is currently no restriction on cross-country motorized travel.
Firewood Cutting	All	Ongoing	District-wide personal use firewood
Roads & Trails			
Danger Tree removal	All	On going	Fall and remove Danger Trees as prescribed in: Filip, G., et al (2014). <i>Field Guide for Hazard-Tree Identification and Mitigation on Developed Sites in Oregon and Washington Forests</i> . Portland, OR: USDA For. Ser. Pac. NW Reg.

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Road Construction		2019	5182-500 roadway brushing, additional surface drainage, and roadway reconditioning, new ditch relief culverts
		2018	5175 – Replaced undersized culvert, reconditioned roadway, added additional surface drainage
		2018	5182 – Roadside brushing, added additional surface drainage, and reconditioned roadway
		2018	5100 – Chip sealed approximately 2 miles of pavement section in Vey Meadows
Culvert Replacement		Ongoing	5182-500 replace with another new culvert to meet ODFW specs
Road Maintenance	All	Ongoing	5100, 5155, 5160, 5175, & 5178 surface maintenance as funding allows.
Range Allotments			
Sheep Creek Ranch AMP	All	Ongoing	32,574 acres; 352 cow/calf pairs; 6/16-10/15 ; Term permit and Term Private Land permits; Semi deferred and season long grazing system.
Water Quality and Fisheries			
Fish Habitat and Floodplain Restoration	Sheep + Chicken	2018-2020 2021-2025	24 Miles of Stream Restored Additional handcrew work and riparian veg planting from within existing project footprints
Wildlife Enhancement			
Trail TMA	All	Ongoing	Period of Restriction: Beginning of Rifle Bull Season – April 1 st
Private Land Activities			
Commercial Harvest	All	2015-2020	None known at this time.
Fuels Reduction	None		
Private structures	All	Ongoing	Various locations throughout the project area.
Grazing	All	Ongoing	Vey Meadows
Roads	None	None	No known new road construction planned.

Cumulative Effects Determination Tables

Silviculture/Vegetation Management

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	No	While these activities would improve vegetative health and sustainability due to removal of competition from invasive species, it would be difficult to measure at the landscape level.
Veg Management		No	No	No	
Recreation-Dispersed Camping		Yes	Yes	No	
Recreation-Snowmobile Trails		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments	Impacts to Cottonwood	Yes	Yes	Yes	Cottonwood has the potential to be impacted by grazing; fencing will be used to mitigate this potential effect.
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities		Yes	Yes	No	

Old Growth

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management	Reduction of invasive species competition	Yes	Yes	No	
W-W Invasive Species Treatment ROD					
Veg Management		No	No	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation- Dispersed Camping		Yes	Yes	No	
Recreation- Snowmobile Trails		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments		Yes	Yes	No	
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities		Yes	Yes	No	

Socio-Economics

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	No	
Veg Management		No	No	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation- Dispersed Camping		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	Increases public safety.
Grazing Allotments		Yes	Yes	No	
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities • Private Structures		Yes	Yes	Yes	Timber harvest and noncommercial thinning activities on private land contribute to the support of timber industry jobs in Union County.

Fire and Fuels Management

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	No	
Veg Management		No	No	No	
Fuels Reduction & Rx Burning	Larger Analysis area for smoke impacts	Yes	Yes	Yes	Potential for smoke impacts; however, these are managed under air quality standards for all projects.
Recreation-Dispersed Camping		Yes	Yes	No	Human caused fires are a minor part of the fire starts within the area. There are many dispersed camp sites, thus the potential for fire starts from vehicles, campfires, and smoking exist.
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance	Decreased response time.	Yes	Yes	No	Slight potential to improve response times due to better maintained road surfaces.
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments	Reduction in fine fuel loadings	Yes	Yes	Yes	Grazing reduces the fine fuel loading in the natural openings improving the efficacy of fuel reduction actions. Active allotments may have the grass reduce to a level that reduces fire spread rates. Livestock grazing is not expected to impede progression toward historic fire return intervals.
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities		Yes	Yes	No	

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Big Game

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management	Reduction of invasive species competition	Yes	Yes	No	
W-W Invasive Species Treatment ROD					
Veg Management		Yes	Yes	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation- Dispersed Camping		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments		Yes	Yes	No	
Wildlife Enhancement – Trail TMA		Yes	Yes	No	Provides additional security habitat for elk and deer
Private Land Activities		Yes	Yes	No	

PETS – Wildlife

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	No	
Veg Management		No	No	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation-Dispersed Camping		Yes	Yes	No	
Recreation - Firewood Cutting	Reduction of snag habitat	Yes	Yes	Yes	Temporarily opening roads for harvest activities can result in a temporary increase in firewood cutting along the roads reducing habitat for
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments	Increased grazing impacts	Yes	Yes	Yes	Reducing canopy cover could increase forage availability, increasing grazing activities. Heavy grazing activities could reduce food availability for the intermountain Sulphur and Western bumblebee.
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities		Yes	Yes	No	

Management Indicator Species: Terrestrial - Goshawk and Pileated Woodpeckers (see also LOS)

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	No	
Veg Management		Yes	Yes	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation- Dispersed Camping		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments		Yes	Yes	No	Ongoing and future livestock grazing is expected to have minimal effect on suitable habitat, Additional grazing may occur in treated stands within the project area but is not expected to alter suitable habitat as cattle do not impact down wood, canopy cover or snag levels.
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities	Reduce available habitat	Yes	Yes	Yes	Private land activities are expected to continue and manage stands primarily out of commercial and wildfire mitigation interests. Treatments will likely not incorporate goshawk/pileated habitat needs and will reduce the available habitat.

Management Indicator Species: Terrestrial - American Marten (see also LOS)

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	No	
Veg Management		No	No	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation- Dispersed Camping		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments		Yes	Yes	No	
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities					

Management Indicator Species: Terrestrial - Primary Cavity Excavators

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	No	
Veg Management		Yes	Yes	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation-Dispersed Camping		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	Slight	Firewood cutting continues to reduce available snags and logs, but the effect is limited to areas adjacent to open roads and gentle topography. Roads that are temporarily open for harvest activities could temporarily increase firewood cutting activities and snag densities in those areas would go down, though it is illegal to take snags > 21 inch dbh.
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments		Yes	Yes	No	
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities		Yes	Yes	No	Private land activities are expected to be focused on commercial and wildfire mitigation interests. Stands will be managed for health, reducing available snags.

Neotropical Migratory Birds (NTMB)

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	No	
Veg Management		Yes	Yes	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation-Dispersed Camping		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments		Yes	Yes	No	
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities		Yes	Yes	No	

Water Quality, Fisheries Habitat, and Populations

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect/Risk	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD		Yes	Yes	No/Low	Weed treatments within RHCAs pose a risk to aquatic habitat and species and BMPs are used to minimize potential effects. Mitigation measures that include type of chemical treatments (using only herbicides that are labeled for use adjacent to aquatic areas), application rates, area treated, timing, and buffers on streams significantly reduce the risk of effects from this activity. Therefore, ongoing noxious weed treatment activities are rated as having a low risk of cumulative effects with the activities proposed under the action alternatives for the Sheep Creek Project on watershed processes, and aquatic species and their habitat.
Veg Management		No	No	No	Road improvements, road decommissioning and LWD additions proposed in Sheep Creek are expected to result in incremental improvement in watershed processes and aquatic habitat.
Fuels Reduction & Rx Burning		No	No	No	No pile burning would occur in RHCAs, therefore low risk of increases in erosion rates due to natural fuels burn blocks would allow low intensity fire to back into the outer edges of RHCAs.
Recreation – Dispersed Camping		Yes	Yes	No/Low	Dispersed campsites are located adjacent to fish-bearing streams. Dispersed campsites adjacent to streams are a source of fine sediment and camp wood cutting can reduce future LWD to stream channels. Closing an

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					blocking road XXXX would have beneficial effects to water quality and fish and aquatic habitat by blocking motorized use and causing erosion and sediment.
Recreation -Firewood Cutting		Yes	Yes	No/Low	Harvest of these products is not permitted in administratively prohibited areas such as developed campgrounds or within 100 feet of wet areas, seeps springs, bogs, and standing or flowing water. No trees are permitted to be cut within 300 feet of perennial fish-bearing streams. Compliance with these regulations is monitored by USFS Special Forest Product Coordinators and Law Enforcement Officers.
Recreation – OHV Use		Yes	Yes		
Road Maintenance		Yes	Yes	Yes/ Moderate	The short-term effects from road maintenance activities are minimized by following INFISH standards and guidelines, and road maintenance BMPs. In the long-term, road maintenance activities reduce adverse effects to aquatic habitat by reducing overall erosion rates on the road system.
Roads – Danger Tree Removal		Yes	Yes	No/Low	Danger trees within RHCAs are cut but left on site.

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Grazing Allotments	Potential damage to riparian areas and water quality.	Yes	Yes	Yes/ Moderate	Harvest, fuels reduction work, and prescribed burning has the potential to make areas not previously accessible to cattle accessible; however, there is such limited entry into RHCAs that this is not expected to increase potential for impacts to riparian areas and water quality from grazing. INFISH S&Gs and WWNF utilization levels minimize cattle impacts to aquatic habitat.
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities		Yes	Yes	No/Low	Erosion rates from logged areas on private lands likely increased during and after logging activities. Impacts from these timber sales have likely abated since majority of the harvest activities occurred around 11 years ago.

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Soils

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management	Reduction of invasive species competition	Yes	Yes	No	Does not create any ground disturbance.
Veg Management		No	Yes	No	
Fuels Reduction & Rx Burning		No	No	No	Blue Fly Fuels reduction will not overlap within Sheep Creek units, soil impacts may occur within Blue Fly units and was previously analyzed.
Recreation-Dispersed Camping		Yes	Yes	No	Potential for some disturbance but primarily would occur within already disturbed areas.
Recreation - Firewood Cutting		Yes	Yes	No	Some disturbance from skidding trees and driving off road to retrieve wood – but generally very limited where occurs and minor in nature.
Recreation – OHV Use		Yes	Yes	No	Cross-country travel and OHV use could create limited areas of soil compaction, displacement and puddling but would be too limited in aerial extent to measure and unlikely to measurably increase in the foreseeable future.
Road Maintenance		Yes	Yes	No	Already disturbed
Roads – Danger Tree Removal		Yes	Yes	No	Minor, same as firewood.
Grazing Allotments		Yes	Yes	No	Potential additional access of cattle into units previously inaccessible.
Wildlife Enhancement – Trail TMA		Yes	Yes	No	This would reduce OHV and cross-country travel within the closure area for part of the year, which reduces the potential for soil impacts.
Private Land Activities		No	No	No	Don't overlap in time and space because units are all on NFS lands.

PETS – Plants

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction of invasive species competition	Yes	Yes	Slight potential	If invasive species are in area/habitat of sensitive species – potential to decrease competition for site resources.
Veg Management		No	Yes	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation-Dispersed Camping		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance		Yes	Yes	No	
Roads – Danger Tree Removal		Yes	Yes	No	
Grazing Allotments		Yes	Yes	Yes	Grazing impacts could occur if the timing of grazing was during late spring or early summer. It is possible that Sheep Creek project activities such as harvest and prescribed burning could open up suppressive vegetative cover and promote the plant's growth, abundance and vigor making it both more available and desirable to livestock. As with the majority of sensitive plant species, conclusive information as to their growth habits and how various influences (natural
					and human) may benefit or negatively impact is largely unknown. Timing of grazing is an activity within the control of grazing allotment administration and can be incorporated into annual operating instructions if monitoring indicates an

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					adverse impact.
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities					

Noxious Weeds

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management W-W Invasive Species Treatment ROD	Reduction in the extent and spread of invasive plant populations	Yes	Yes	Yes	Reduces the extent and amount of invasive plant sites throughout the project area through on-going treatments of existing invasive populations.
Veg Management	None noted	No	No	No	None considered
Fuels Reduction & Rx Burning Blue Fly Fuels Reduction	Ground disturbance favorable to spread of invasive plant material.	No	Yes	Yes	Increased acres of disturbed ground could add to the potential receptive area to weed seed spread.
Recreation- Dispersed Camping	Movement and introduction of invasive plant material	Yes	Yes	No	Minimal risks involved with dispersed camping due to the movement and spread of invasive plant material by people and equipment. This risk is further minimized by a focused treatment of invasive plants in and around camping and gathering areas.
Recreation -Firewood Cutting	Movement and introduction of invasive plant material.	Yes	Yes	No	Minimal risks involved with firewood gathering due to the limited nature of the activity and the location near already established roads. This risk is further minimized by a focused treatment of invasive plants in commonly used gathering areas.
Recreation – OHV Use	Movement and introduction of invasive plant material.	Yes	Yes	Yes	Unregulated use of off highway vehicles poses a risk to the establishment and spread of non-native species due to the movement of plant material on equipment and the ability to introduce these materials to random areas that are difficult to identify for treatment. Re-opening roads and opening up stands

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					with fuel reduction treatments in the Sheep Creek project increases the potential for introduction and spread of invasive plant material.
Road Maintenance	Increase in possibility of spread and new introduction.	Yes	Yes	Yes	Ongoing road maintenance creates situations that favor the spread of invasive plants by disturbing roadsides and can increase the establishment by carrying seeds to un-infested areas.
Roads – Danger Tree Removal	Movement and introduction of invasive plant material.	Yes	Yes	No	Minimal risks involved with firewood gathering due to the limited nature of the activity and the location near already established roads. This risk is further minimized by a focused treatment of invasive plants in commonly used gathering areas.
Grazing Allotments	Ground disturbance and transportation of non-native plant material.	Yes	Yes	Yes	Cattle are vectors for invasive plant seeds. Opening up the forest with fuel reduction practices along with creating seed beds through ground disturbance increases the potential for cattle to transport noxious weed seeds into new areas and increase spread.
Wildlife Enhancement – Trail TMA	Reduction in road use during critical winter range period	Yes	Yes	No	Decrease in human travel would decrease the potential spread of weed seeds and ground disturbance associated with weed establishment.
Fish Habitat and Floodplain Restoration 24 Miles of Stream Restoration Activities	Ground disturbance and transportation of non-native plant material.	Yes	Yes	Yes	Potential for weed seeds to be carried from private land which may not have an active invasive plant management program to locations that intersect with project activities.

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Private Land Activities	Equipment and materials traveling on road systems shared by project.	Yes	Yes	Yes	Potential for weed seeds to be carried from private land which may not have an active invasive plant management program to locations that intersect with project activities.
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Access and Transportation Management

Project	Potential Effects	Overlap in:		Measurable Cumulative Effect?	Effects
		Time	Space		
Noxious Weed Management					
W-W Invasive Species Treatment ROD		Yes	Yes	No	Will not affect road surfaces.
Veg Management		No	Yes	No	
Fuels Reduction & Rx Burning		No	No	No	
Recreation-Dispersed Camping		Yes	Yes	No	
Recreation-Snowmobile Trails		Yes	Yes	No	
Recreation - Firewood Cutting		Yes	Yes	No	Some traffic on road system anticipated for firewood gathering but not expected to be measurable to road system.
Recreation – OHV Use		Yes	Yes	No	
Road Maintenance	Improved road conditions and other resource protection	Yes	Yes	Yes	
Roads – Danger Tree Removal		Yes	Yes	No	Minor scattered occurrence, not expected to have measurable effect to transportation system; however, will improve public safety and reduce the need for logging down trees out of roads.
Grazing Allotments		Yes	Yes	No	
Wildlife Enhancement – Trail TMA		Yes	Yes	No	
Private Land Activities		Yes	Yes	No	